

PCEM 2

(SECOND YEAR OF THE FIRST CYCLE OF MEDICAL STUDIES)

The theoretical, tutorial and practical courses of the second year of the first cycle of medical studies at the 'Faculté Libre de Médecine', are divided as follows :

	Theoretical courses		Tutorial and practical courses		Total	Credits
	1 st sem.	2 nd sem.	1 st sem	2 nd sem.		
Anatomy	30 h		-	10 h	40 h	5
Metabolism Biochemistry	45 h	-	4 h	-	49 h	5
Biophysics of Senses	22 h	-	-	-	22 h	2
Medical Genetics	32 h	-	8 h	-	40 h	4
Basic Haematology	-	13 h 30	-	3 h	16 h 30	2
Histology	26 h	-	14 h	-	40 h	3
Immunology	-	12 h	-	-	12 h	2
Physiology	35 h		10 h	-	45 h	4
Medical Psychology	35 h		-	6 h	41 h	6
Clinical Biochemistry	-	22 h	-	-	22 h	2
Medical and Surgical Semeiology	-	42 h		6 h	48 h	10
Neurosciences		70 h	-	-	70 h	9
Clinical Biochemistry	-	22 h	-	-	22 h	2
Optional Courses			20 h to 30 h		20 to 30 h	2

Training Periods in Hospitals		4 weeks	2
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Practical courses are organized in Anatomy, Histology, Physiology, Biophysics, Haematology, Psychology, Surgical and Medical Semeiology.

P.C.E.M. 2 – First Semester

Metabolism Biochemistry

45 hours of theoretical courses

5 hours of tutorial courses

Programme :

Metabolism of carbohydrates, lipids and aminoacids ; metabolism of purine and pyrimidine nucleotides, of nucleic acids ; DNA organization and replication ; RNA synthesis and processing ; protein synthesis and genetic coding, regulation of gene expression ; glycoprotein synthesis ; principle of molecular biology ; cancer, oncogenes and growth factors ; metabolism of adrenal and gonadic steroids ; metabolism of porphyrins ; metabolism of xenobiotics and free radicals.

Responsible : Pr. J-L. DHONDT

Teachers : Pr. J-L. DHONDT, Pr. G. FORZY

Histology

28 hours of theoretical courses

Programme :

Circulatory system, digestive system, skin, urinary system, endocrine system, immune system, female reproductive system, male reproductive system, special senses, respiratory system.

Responsible : Pr. P. GOSSET

Teachers : Pr. P. GOSSET, Pr. C. CREUSY

14 hours of tutorial courses

Programme :

Thymus, adenoids, lymph nodes, spleen, hypophysis, submandibular gland, thyroid gland, parotid gland, adrenal gland, pancreas, aorta, arteries, veins, lungs, kidney, bladder, stomach, intestine, liver, duodenum, testis, epididymis, prostate gland, ovary, skin, mammary gland, retina.

Responsible : Pr. P. GOSSET

Teacher : V. CONSEIL

Biophysics of Senses

22 hours of theoretical courses

Programme :

Biophysics : elementary knowledge, application to the acoustic, biophysics of hearing, biophysics of seeing : physical optics, geometric optics, physiological optics. Practical courses concerning this theme are a part of the tutorial Physiology.

Responsible : Pr. G. FORZY

Teachers : Pr. G. FORZY, Dr. CADART, Dr. DELEPINE

Medical Genetics

32 hours of theoretical courses & 8 hours of tutorial courses

Programme :

Pedigree tree ; Mendelian inheritance ; Lyon's hypothesis ; genic frequency ; Hardy-Weinberg's law ; inbreeding, inbreeding coefficient, Kinship coefficient, homozygosity rate ; molecular genetics, PCR, Southern Blot ; genetic fingerprinting ; uniparental disomy ; cytoplasmic inheritance ; unsteady mutations ; karyotype and chromosomal banding ; chromosome abnormalities, trisomy 21, trisomy 13, trisomy 18, Turner's syndrome, Klinefelter's syndrome, fragile X syndrome ; deletions and microdeletions, FISH ; non congenital chromosomal abnormalities ; prenatal diagnosis ; genetic counselling ; molecular genetics.

Responsible : Pr. B. DELOBEL

Teachers : Pr. G. VITTU, Pr. B. DELOBEL

P.C.E.M. 2 - Second Semester

Clinical biochemistry

22 hours of theoretical courses

Programme :

Water, electrolyte and hydrogen ion disorders ; blood gas ; kidney disorders ; cancer markers ; biochemical assessment of nutrition disorders ; immunoglobulins ; inflammatory

diseases ; diagnostic enzymology ; hepatic disorders ; disorders of carbohydrate metabolism ; disorders of lipid metabolism.

Responsible : Pr. J-L. DHONDT

Teachers : Pr. J-L. DHONDT, Pr. G. FORZY.

Semeiology

- Medical semeiology

34 hours of theoretical courses

Responsible : Pr. P. CORNAERT

*** Semeiology of respiratory system**

10 hours of theoretical courses

Programme :

Symptoms of respiratory disease : cough, expectoration, hemoptysis, chest pain, dyspnea ; physical examination : inspection, palpation, percussion, auscultation ; extrathoracic manifestations of pulmonary disease : clubbing, hypertrophic pulmonary osteoarthropathy, cyanosis ; pulmonary function tests ; roentgenologic examination : standard roentgenography, computerized tomography ; diseases of the pleura : pleura effusion, pneumothorax ; parenchymal consolidation – atelectasis.

Teachers : Pr. P. MULLIEZ, Pr. M. SMITH, Dr. C. CROXO

*** Semeiology of the digestive system**

6 hours of theoretical courses

Programme :

Functional disorders (pain-dysphagia-heartburn-nausea and vomiting-diarrhea-constipation-digestive bleeding). The physical examination in digestive pathology, the different syndroms of the digestive pathology, oesophageal syndrom, gastritic syndrom, ulcerous syndrom, colonic syndrom, rectal syndrom, pancreatic syndrom. Portal hypertension and complications. Ascitis. Imaging techniques and haemodynamic measurements. Differential diagnosis (semiology of the pre-sinusoidal, post-sinusoidal blocks, Budd-Chiari syndrom, segmental portal hypertension).

Teachers : Pr. B. FILOCHE, Pr. D. LUCIDARME

*** Semeiology of cardiovascular system**

10 hours of theoretical courses

Programme :

Normal heart : recall of basis in physiology, heart sounds ; main symptoms in cardiac diseases ; clinical examination ; main laboratory procedures ; arterial pressure ; auscultation in valvular diseases ; symptoms and clinical examination in cardiac heart failure, coronary artery disease, peripheral artery disease ; lypothymias and syncopes.

Teachers : Pr. D. BEAUGEARD, Pr. P. CORNAERT, Dr. J-J. LEDUC

*** Haematological semeiology**

4 hours of theoretical courses

Programme :

Clinical evaluation of the patient with haematologic disease : clinical manifestations of erythrocytes disorders, clinical manifestations of disorders of hemostasis, lymph node enlargement and splenomegaly.

Teacher : Pr. C. ROSE

*** Gynaecologic semeiology**

4 hours of theoretical courses & 2 hours of tutorial courses

Programme :

Clinical examination, investigation in gynaecology, mammary pathology, menstrual cycle, uterine tumors.

2 hours of tutorial courses

Programme :

Vaginal touch on a stuffed dummy.

Teacher : Dr. G. BRABANT

- Surgical semeiology of traumatology

15 hours of theoretical courses

Responsible : Pr. D. THERY

Programme :

General semeiology of fractures, dislocations, sprains, joints – specific semeiology of shoulder, elbow, wrist, hand, knee, ankle, foot – specific semeiology of the spinal column

Specific semeiology of articular infections, nervous lesions, superficial and deep wounds

2 hours of tutorial courses :

Apprenticeship of sutures.

Teacher : Pr. D. CORDONNIER, Pr. J.F. DESROUSSEAUX, Dr. G. POLVECHE

Neurosciences

70 hours of theoretical courses

Anatomy, neurobiology, physiology, embryology of the central nervous system. Methods of exploration of the CNS – Sensory receptors – Spinal cord (roots, pathways) – Reflexes – Brainstem – Reticular formation – Hypothalamus – Cerebellar control – Basal ganglia – Thalamus – Brain cortex – Somatic sensation – Pain – Wakefulness and sleep – Autonomic nervous system – Skeletal muscle tone – Equilibrium.

Responsible : Pr. P. GALLOIS

Teachers : Pr. P. GALLOIS, Pr. P. HAUTECOEUR, Pr. R. BAILLET, Pr. J-L. DHONDT

Basic Haematology

12 hours of theoretical courses

Programme :

Blood components, plasma and cells – Myelopoïesis, stem cells properties, growth factors, microenvironment – Lymphopoïesis and lymphatic system – Usual methods of analysis in haematology (blood, bone marrow) – Erythrocytes : cytology, life span, haemoglobin, enzymes, erythropoïesis regulation, haemolysis – Leukocytes : production, cytology and functions of granulocytes, lymphocytes, monocytes and macrophages – Megakaryocytes and platelets – Blood clotting and fibrinolysis : hemostasis, pathophysiology of thrombosis – Immuno-haematology : red cell groups : ABO, rhesus and other systems, application to RBC transfusion, leukocyte and platelet groups, HLA, application to tissue transplantation.

4 hours of tutorial courses

Responsible : Pr. J-L. DEMORY

Teachers : Pr. J-L. DEMORY, Pr. C. ROSE, Dr. A. CHARPENTIER

Immunology

12 hours of theoretical courses

Programme :

Hemopoiesis and lymphoid organs ; antibody and antigen structure ; antibody-antigen interaction ; B and T-cells development, receptors and gene ; the major histocompatibility complex ; complement ; cell-mediated immunity and specific immune response ; inflammation and non-specific immune response ; introduction to immunopathology.

Responsible : Dr. A. CHARPENTIER

Teachers : Dr. A. CHARPENTIER

PCEM2 : First and Second Semester Courses
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Anatomy

30 hours of theoretical courses

Anatomy of the neck, of the digestive system (canal and glands), of the spleen ; osteology of the head ; anatomy of the ear and the eye.

Tutorial Course (2nd semester)

Dissection 10 h (not compulsory)

Radiological Anatomy : 2 hours

Responsible : Pr. M. SMITH

Teachers : Pr. M. SMITH, Dr. F. PODDEVIN.

Physiology

35 hours of theoretical courses

Programme :

Digestion – Endocrine physiology : introduction – Thyroidal physiology, adrenal cortex, endocrine function of the pancreas, calcium metabolism, hypothalamus and hypophysis – temperature regulation – Control of the cardiovascular system – Body water and electrolyte composition regulation – Physiology of exercise – Chronobiology – Endocrinology of reproduction.

8 hours of tutorial courses

Programme :

Control of the cardiovascular system in work – Electroencephalography – Audiometry – Blood cells and blood groups – Optics.

Responsible : Pr. P. GALLOIS

Teachers : Pr. P. GALLOIS, Pr. D. de BROUCKER, Pr. P. GRAUX, Dr. P. VANDEVENNE, Dr. DEROUBAIX, Dr. F. DELECOURT, Dr. J. CHEVALIER, Dr. C. PONCHAUX, Mrs. D. PONCHAUX

Medical Psychology

40 hours of theoretical courses

Programme :

An approach to medical psychology and psychiatry – Personality, temperament – Fundamental and elementary pulsions according to Freud and psychoanalysis – The patient's complain, cognitive – School of behavioral theories – The body of the functional patient – The body experiences of the patient with social demands, ethical point of view on the body experience – The doctor-patient relationship, family therapies, the communication theories, psychological testing of emotions, sentiments and humor – The affective

development in childhood, adolescent crisis, development of cognitive structures, adolescents addictions, language development, dyslexia-dysgraphia – The placebo effect.

6 hours of tutorial courses

Programme :

Initiation to technics of self-assertion – Initiation to transactional analysis – Initiation to the doctor-patient relationship – Relaxation – Psychological tests – Consulting infants.

Responsible : Pr. L. CONVAIN

Teachers : Pr. L. CONVAIN, Pr. V. DODIN, Mrs. C. BLOND, Mrs. DUJARDIN

Optional Courses

	Theoretical Courses	Tutorial and practical courses	Total	Credits
Arts & Brain	12 h	18 h	30 h	2
Imagery	15 h	15 h	30 h	2
Initiation to the research technics in Human and Environmental pathology	16 h	16 h	32 h	2
Social Sciences		25 h	25 h	2
Relationship and Communication		30 h	30 h	2
Physiopathology	15 h	15 h	30 h	2

The students have to follow one optionnal course :

*** Arts & Brain**

12 hours of theoretical courses

18 hours of tutorial & practical courses

Responsible : Pr. P. GALLOIS

*** Initiation to the research technics in Human and Environmental pathology**

12 hours of theoretical courses

18 hours of tutorial courses

Responsibles : Pr. J-C. CAILLEZ – Pr. C. CREUSY

*** Imagery**

15 hours of theoretical courses

15 hours of tutorial courses

Responsible : Pr. M. SMITH

*** Social Sciences (Philosophy of Medicine)**

25 hours of theoretical courses

Programme :

The Philosophical reflexion in Medicine.

Responsible : Pr. P. BOITTE

*** Relationship and Communication**

30 hours of tutorial courses

Programme :

Basis Techniques of Communication – the face-to-face interview – the different steps of the patient interview.

Responsible : Dr. J-J. LEDUC

*** Physiopathology**

15 hours of theoretical courses and 15 hours of tutorial courses

Programme :

Bibliography techniques with the exploitation of a theme.

Responsible : Pr. G. FORZY

PCEM 2 : Training Periods in Hospital / 4 weeks / Credits : 2
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- 1) Introduction to the nursing care and to the Hygiene
1 month (full-time) from september 15th to october 1st
and from may 15th to may 31st
- 2) Introduction to hospital functions
25 mornings during the year
on Friday morning during the 1st Semester
on Tuesday morning during the 2nd Semester
- 3) Optional training abroad (not compulsory)